

AFOQT Prep

Lesson 2

Verbal Analogies

Math Knowledge

Verbal Analogies

Ex: BEAVIS is to BUTTHEAD as:

- A. Lt Bartlett is to Lt Slechta
- B. Apple is to Orange
- C. Building is to Skyscraper
- D. High is to Low

25 Questions, 8 Minutes
Time Management: 3 Questions Per
Minute

Strategies To Remember

- REPHRASING THE QUESTION
- RECOGNIZING 5 TYPES OF ANALOGIES
- PART OF SPEECH: VERB, NOUN, ADJECTIVE, ETC
- TENSE: PAST, PRESENT, FUTURE

5 Types of Verbal Analogies

- SYNONYM/DEFINITION
- ANTONYM
- FUNCTION/RELATIONSHIP
- TYPE
- PART-TO-WHOLE

5 Types of Analogies

- **SYNONYM:** same meaning or definition

Ex: ALTRUISTIC is to UNSELFISH as SAFETY is to:

- A. HEIGHT
- B. OBJECTIVE
- C. QUAIN
- D. SECURITY
- E. BELT

Ex: SANCTUARY is to REFUGEE:

- F. CAVE is to BEAR
- G. VAULT is to VALUABLES
- H. TRIUMPH is to CONTEST
- I. CARNIVORE is to OMNIVORE

5 Types of Analogies

- **ANTONYM: opposites**

Ex: HAPPY is to SAD as RIGID is to:

- A. STIFF
- B. FLEXIBLE
- C. CONSERVATIVE
- D. TIGHT
- E. FAULTY

Ex. PRIDE is to HUMBLE:

- F. SERVILE is to SERVANT
- G. HUMOR is to SOMBER
- H. WOOD is to TREE
- I. CAMPING is to RECREATION
- J. SHOVEL is to DIG

5 Types of Analogies

- FUNCTION/RELATIONSHIP

Ex: HAMMER is to NAIL as:

- A. PEN is to INK
- B. KNIFE is to SHARP
- C. CAR is to WHEEL
- D. SCISSORS is to PAPER
- E. GLUE is to TUBE

Ex. BAROMETER is to PRESSURE as CALIPERS is to:

- F. CUTTING
- G. HEIGHT
- H. CONSTANCY
- I. THICKNESS
- J. PLIERS

5 Types of Analogies

- TYPE: #1 is a type of #2

Ex: ARGON is to GAS as:

- A. BOOK is to LIBRARY
- B. MAPLE is to TREE
- C. HEART is to PACEMAKER
- D. PAUPER is to MONEY
- E. COMPUTER is to KEYBOARD

Ex. TOOL is to DRILL as POEM is to:

- F. SONG
- G. MACHINE
- H. SONNET
- I. BIRD
- J. NOVEL

5 Types of Analogies

- PART-TO-WHOLE

Ex: SINGER is to CHOIR as:

- A. JUICE is to COLA
- B. SENATOR is to REPRESENTATIVE
- C. PILOT is to JET
- D. FOREARM is to SKELETON
- E. BUTTON is to NOZZLE

Alternately presented as: Whole-to-Part

Ex: DOLLAR is to QUARTER as:

- F. MEDICINE is to HARM
- G. MILK is to BREAKFAST
- H. HANDS is to CLOCK
- I. MONTH is to WEEK
- J. CRANE is to LIFT

PREPARE TO TEST

Time Management: 3 Questions Per
Minute

1. FORK is to EAT as PEN is to:
 - A. INK
 - B. PENCIL
 - C. WRITE
 - D. LETTER
 - E. BOOK

2. BOOK is to CHAPTER as BUILDING is to
 - A. ELEVATOR
 - B. LOBBY
 - C. ROOF
 - D. STORY
 - E. WING

3. ACTOR is to STAGE as:
 - A. PATIENT is to DOCTOR
 - B. OUTSIDE is to BENCH
 - C. GARAGE is to CAR
 - D. TEACHER is to CLASSROOM
 - E. METER is to ELECTRICITY

4. TYRANT is to CRUELTY
- A. DRAWL is to SPEAKER
 - B. COMPILE is to DISSEMBLE
 - C. ACCOLADE is to AWARD
 - D. SYCOPHANT is to FLATTERY
 - E. WAX is to CANDLE
5. SLOTH is to LAZINESS
- A. GENTEEL is to VULGAR
 - B. INSOMNIAC is to SLEEPLESSNESS
 - C. HACKNEYED is to UNIQUE
 - D. ACCEDE is to RESPECT
 - E. CRYPT is to TOMB
6. HALLOWED is to SACRED
- A. SOLDIER is to ARMY
 - B. GAMUT is to PROVINCIAL
 - C. LIBEL is to PRAISE
 - D. NOMADIC is to WANDERING
 - E. OBLIVIOUS is to KEEN

7. DANCER is to ENSEMBLE
- A. YOGURT is to MILK
 - B. STUDENT is to CLASS
 - C. MOUNTAIN is to PRECIPICE
 - D. FLOCK is to SHEEP
 - E. DOODLE is to NOTEBOOK
8. ANARCHIST is to DISORDER
- A. YAWN is to BOREDOM
 - B. MONTH is to YEAR
 - C. GOOD is to BEST
 - D. PACIFIST is to PEACE
 - E. CONSTELLATION is to STARS
9. DOCTOR is to HEALING
- A. PRISON is to GUARD
 - B. DINOSAURS is to PALEONTOLOGIST
 - C. AUTHOR is to WRITING
 - D. CLAP is to HANDS
 - E. PLANETS is to UNIVERSE

10. POLICE is to LAW

- A. LION is to DEN
- B. BRUSH is to HAIR
- C. CONDUCTOR is to ORCHESTRA
- D. BOOK is to LIBRARY
- E. CLERGY is to RELIGION

11. COOL is to FRIGID

- A. SPEAKER is to ASSEMBLY
- B. BUG is to COLD
- C. WATER is to BUCKET
- D. DISLIKE is to DETEST
- E. STUNT is to GROWTH

12. BREEZE is to GALE

- A. EYES is to FACE
- B. MALEVOLENT is to CHARITABLE
- C. HOSTILE is to ENEMY
- D. SNOWFLAKE is to BLIZZARD
- E. PUNGENT is to SMELL

13.CRUMB is to LOAF

- A. PAINTER is to CANVAS
- B. PUDDLE is to OCEAN
- C. SOUND is to MICROPHONE
- D. PRIDE is to FALL
- E. FEATHER is to QUILL

14.CROISSANT is to PASTRY

- A. SCHOOL is to FISH
- B. TREE is to PEACH
- C. HAIKU is to POEM
- D. KNIFE is to CUT
- E. VENISON is to DEER

15.ROMANCE is to NOVEL

- A. BOON is to BLESSING
- B. RAP is to MUSIC
- C. CREDO is to IMMORAL
- D. FRICTION is to SANDPAPER
- E. DETERMINED is to HESITANT

16. TANKER is to SHIP

- A. INSECT is to ANT
- B. MATRIARCH is to MOTHER
- C. MINIVAN is to AUTOMOBILE
- D. COW is to VEAL
- E. DEGREE is to COLLEGE

17. WHALE is to OCEAN

- A. CONGREGATION is to CROWD
- B. POUND is to DOGCATCHER
- C. CHURCH is to STEEPLE
- D. COURT is to TENNIS
- E. BEE is to HIVE

18. PRISTINE is to UNSPOILED

- A. TAINTED is to CONTAMINATED
- B. EASE is to TAXING
- C. ARID is to DELUGED
- D. CHAMPIONED is to ABASED
- E. ANIMUS is to KINDNESS

19.BIRTH is to LIFE

- A. RODENT is to SKUNK
- B. GENTRY is to NOBILITY
- C. PROLIFERATE is to CEASE
- D. WINCE is to JOY
- E. EXPOSURE is to INFECTION

20.MEDITATION is to RELAXATION

- A. ORDER is to CHAOS
- B. SYMPTOMS is to BACTERIA
- C. HONE is to WHET
- D. SATIATION is to SATISFACTION
- E. DEXTERITY is to ACCOMPLISHMENT

21.ISOLATION is to LONELINESS

- A. SHORTEN is to NIP
- B. QUIET is to TACIT
- C. PROMOTION is to ADVANCEMENT
- D. MONOTONY is to HOMOGENOUS
- E. RUSTIC is to CITY

22.BATHING is to CLEANLINESS

- A. MEDICINE is to HARM
- B. IMPRISONMENT is to PUNISHMENT
- C. BANJO is to COUNTRY
- D. BALLOON is to HELIUM
- E. SADNESS is to BLUES

23.SMILING is to HAPPINESS

- A. EXERCISE is to RUNNING
- B. MOTORCYCLE is to TRAVEL
- C. MILK is to BREAKFAST
- D. SCOWLING is to DISPLEASURE
- E. SHOUTING is to POWER

24.HANDS is to CLOCK

- A. PIANO is to MUSIC
- B. JUSTICE is to COURT
- C. LEGS is to BODY
- D. ANNOYED is to FURIOUS
- E. CARNIVORE is to TIGER

25. TENSION is to STRESS as VIRUS is to

- A. LIVING
- B. DISEASE
- C. BACTERIA
- D. IMMUNITY
- E. MORBIDITY

ANSWERS

1. C
2. D
3. D
4. D
5. B
6. D
7. B
8. D
9. C
10. E
11. D
12. D
13. B

Math Knowledge

25 Questions

22 minutes

Just over 1 minute per question

Focus on organizing your thoughts quickly and efficiently while solving

Practice organization on your scratch paper to prevent rework

Math Vocab Review

Tangent

Parallel

Perpendicular

Integer

Rational/Irrational Number

Mixed Number

Fraction

Reciprocal

Math Concepts Review

Trinomials

- Multiplying and Factoring
- Remember FOIL?

Standard $mx+b$ equation for a line

Division with decimals

Mixed numbers and fractions with decimals

PREPARE TO TEST

1. $17/20 + 6/100 + 15/50$ is equal to

A. $43/50$

B. $111/100$

C. $121/100$

D. $83/50$

E. $289/25$

2. $5v - u = -2$ and $-v + 9u = 18$, then the simultaneous solution of the given equation is:

A. $u=3, v=9$

B. $u=2, v=0$

C. $u=1, v=-9$

D. $u=-2, v=-36$

E. $u=3, v=-15$

3. Which of the following statements is false? A triangle can have

- A. three equal angles
- B. one obtuse angle
- C. three equal sides
- D. two right angles
- E. three acute angles

4. The value in $-\frac{1}{9}\sqrt{81}$ is equal to

- A. 0
- B. -1
- C. 1
- D. -9
- E. 9

5. The factors of $30x^2-30$ are
- A. $(5x-6), (6x+5)$
 - B. $(15x+5), (2x-6)$
 - C. $(5x-6), 6x-5)$
 - D. $(30x-5), (x+6)$
 - E. $(5x+5), (6x-6)$
6. Solve $\frac{5}{6} + \frac{3}{4} + (\frac{3}{2} * \frac{9}{21})$
- A. $\frac{66}{52}$
 - B. $\frac{187}{84}$
 - C. $\frac{120}{57}$
 - D. $\frac{66}{145}$
 - E. $\frac{123}{124}$

7. Solve for x using the following two equations:

$$2x + 4y = 10 \text{ and } 9x - 4y = 20$$

A. $x = 21/15$

B. $x = 40/21$

C. $x = 30/11$

D. $x = 8/9$

E. $x = 29/13$

8. The hypotenuse of a right triangle whose legs are 3 feet and 4 feet is

A. 4

B. 5

C. 6

D. 7

E. 8

9. If $w=4c$ then $(3/4)w=$

A. $3/3c$

B. $4/3c$

C. $3c$

D. $c/3$

E. $c/4$

10. Factor $x^2+7x+10$

A. $(2x+2)(x+5)$

B. $(x+5)(x+2)$

C. $(x+2)(2x+2)$

D. $(2x+5)(x+5)$

E. $(2x+)(x+10)$

11. 12.687×10^{-4} is equal to

- A. 1.2687
- B. .12687
- C. .012687
- D. .0012687
- E. .00012687

12. What is the probability of randomly drawing an odd number between 24 and 33 (inclusive)?

- A. 50%
- B. 66%
- C. 75%
- D. 80%
- E. 90%

13. $\frac{2}{3} * \frac{3}{4} * \frac{4}{5} * \frac{5}{6} * \frac{6}{7} * \frac{7}{8} =$

A. $\frac{1}{16}$

B. $\frac{1}{8}$

C. $\frac{1}{4}$

D. $\frac{1}{2}$

E. None of the above

14. $10^5 * 10^6 * 10^7 =$

A. 10^{15}

B. 10^{18}

C. 10^{21}

D. 10^{24}

E. 10^{30}

15. $10^y/10^z$ equals

A. $10^{y/z}$

B. 10^{yz}

C. 10^{y+z}

D. 10^{y-z}

E. None of the above

16. Solve for x when: $(2x)/7=2x^2$

A. $1/7$

B. $2/7$

C. 2

D. 7

E. 14

17. $(-3)^3 =$

A. 9

B. -9

C. 27

D. -27

E. None of the above

18. $\frac{x-2}{x^2-}$ can be reduced to:

A. ~~$\frac{1}{x+4}$~~

B. $\frac{1}{x-2}$

C. $\frac{x-2}{x+2}$

D. $\frac{1}{x+2}$

E. $\frac{1}{x+4}$

19. What are the next two choices following the below pattern?

A R C S E T G ____

A. UH

B. HI

C. UI

D. IU

E. IH

20. What is the next logical choice following the below pattern?

2 4 12 48 ____

A. 96

B. 144

C. 192

D. 204

E. 240

21. The sum of all exterior angles of a triangle is always

- A. 540 degrees
- B. 720 degrees
- C. 900 degrees
- D. 1080 degrees
- E. 1260 degrees

22. $\sqrt{28} - \sqrt{7}$ reduces to

- A. $\sqrt{4}$
- B. $\sqrt{7}$
- C. $3\sqrt{7}$
- D. $\sqrt{21}$
- E. $-\sqrt{35}$

23. The volume of a cylinder with radius b and height w is

- A. πbw
- B. $2\pi bw$
- C. $2\pi b^2w$
- D. $4\pi b^2w$
- E. None of the above

24. The sum of the interior angles of a pentagon is

- A. 360 degrees
- B. 540 degrees
- C. 720 degrees
- D. 900 degrees
- E. 1180 degrees

25. If $2^n=8$, what is the value of 3^{n+1} ?

A. 70

B. 81

C. 95

D. 102

E. None of the above

Answers

1. c
2. b
3. d
4. b
5. e
6. b
7. c
8. b
9. c
- 10b
- 11d
- 12a
- 13c
- 14b
- 15d
- 16a
- 17d
- 18a
- 19c
- 20e
- 21c
- 22b
- 23e
- 24b
- 25b

Review

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A. ~~$\frac{6x+8}{1/(x+4)}$~~

B. $1/(x-2)$

C. $(x-2)/(x+2)$

D. $1/(x+2)$

E. $1/(x+4)$

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B. 81

C. 95

D. 102

E. None of the above

Conclusion

Do homework!

Reinforce these concepts tonight or
you will not retain them

Next lesson – Instruments and Table
Reading